

Notice of Allowability

Application No.

09/716,154

Examiner

Kevin Mew

Applicant(s)

ABI-NASSIF, FIRASS

Art Unit

2664

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 7/5/2005.
2. ☒ The allowed claim(s) is/are 1, 3, 6-7, 9-10, 12, 15-16, 18, 20, 22, 25-26, 28, which have been renumbered as 1-15, respectively.
3. ☒ The drawings filed on 17 November 2000 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---|--|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date <u>8</u> . |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____ | 7. <input type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |

Detailed Action

Response to Amendment

1. Applicant's arguments filed on 7/5/2005 regarding claims 1, 3, 6-7, 9-10, 12, 15-16, 18, 20, 22, 25-26, 28 have been fully considered. Claims 1, 3, 6-7, 9-10, 12, 15-16, 18, 20, 22, 25-26, 28 are currently pending. Claims 2, 4-5, 8, 11, 13-14, 17, 19, 21, 23-24, 27, 29-41 have been canceled by the Applicant.

2. Acknowledgement is made of the amended claims 1, 10, 20 that include all the limitations of allowable claims 5, 14, 24, respectively, and all the limitations of any intervening claims. As a result, the amended claims 1, 10, 20 overcome the obviousness-type double patenting rejection and 35 U.S.C. 102(b) rejection set forth in the previous Office Action. Therefore, both the obviousness-type double patenting rejection and 35 U.S.C. 102(b) rejection have been withdrawn.

EXAMINER'S STATEMENT OF REASONS FOR ALLOWANCE

3. The following is an examiner's statement of reasons for allowance:

The present application relates to providing a system, device, and method for initial ranging in conjunction with a contention-based MAC protocol in a shared-medium communication network, by dynamically adjusting the backoff window size used during a ranging and adjustment process in an attempt to maximize the probability of success outcomes when performing contention access among stations, including the unique steps of:

“taking the first system performance measurement comprises:
providing ranging opportunities and specifying the first backoff window size for collision resolution;
counting a first number of success outcomes in a first sample of N ranging opportunity slots; and
determining the first probability of success outcomes equal to the first number of success outcomes divided by N; and
the step of taking the second system performance measurement comprises:
providing additional ranging opportunities and specifying the second backoff window size for collision resolution;
skipping a number of ranging opportunity slots at least equal to the first backoff window size;
counting second number of success outcomes in a second sample of N ranging opportunity slots; and
determining the second probability of success outcomes equal to the second number of success outcomes divided by N; and
wherein the step of determining the third backoff window size comprises:
determining a ratio R having a numerator equal to the second probability of success outcomes minus the first probability of success outcomes and a denominator equal to the second backoff window size minus the first backoff window size;
setting the third backoff window size greater than the second backoff window size, if the ratio R is a positive value; and

setting the third backoff window size less than the second backoff window size, if the ratio R is a negative value, and wherein the step of setting the third backoff window size greater than the second backoff window size comprises setting the third backoff window size equal to twice the second backoff window size; and

the step of setting the third backoff window size less than the second backoff window size comprises setting the third backoff window size equal to half the second backoff window size.”

The closest prior art, Wah et al. (U. S. Patent No. 4,630,264), discloses a contention resolution protocol on a multi-access network, providing the rules for generating random numbers, estimating the channel load, detecting collisions and controlling the window size accordingly. By generating a random number for each contending station at the beginning of the contention period, and successively modifying the window until exactly one station's number is isolated in the window, the contention is resolved and the packet can be sent. However, Wah fails to anticipate or render obvious the above quoted limitations of the present application. This renders the claims allowable.


Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled “Comments on Statement of Reasons for Allowance.”

Conclusion

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin Mew whose telephone number is 571-272-3141. The examiner can normally be reached on 9:00 am - 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wellington Chin can be reached on 571-272-3134. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


WELLINGTON CHIN
SUPERVISORY PATENT EXAMINER